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THE NEW YORK
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RUFUS PORTER, EDITOR.

TERMS.—$2 a year—$1 in advance, and the remainder in 6 months.

☞ *See Advertisement on last page.*

THE GOOD OLD TIMES.

I wish the fashions were the same
As thirty years ago ;
I can't imagine what should make
The tailors change them so ;
When I was in my youth I made
A coat of homespun do,
And thought it very fine to have
My hair tied in a queue.

And in those days our breeches were
All buckled at the knee ;
And silver buckles would ensure
The best of company ;
Our beavers were of comely shape,
And kept off sun and rain—
Oh, how I wish those broad brim hats
Would come in vogue again.

I'm troubled with a half a yard
Of cloth about my feet ;
My coat is made so very small
The laps will hardly meet;
Tight knees are all the fashion now,
And shoes must have square toes ;
Where Fashion will arrive at last,
The tailor only knows.

The dandies of the present day,
Have watch chains all of gold—
You'd think their monstrous pocket books
Were fill'd with wealth untold !
My father wore a silver watch,
And eke a good steel chain,
And well I recollect his straight
Old pewter headed cane.

He owned a large and thrifty farm
Of wood and meadow land,
And always had a plenty of
The dollar coins on hand ;
I guess some dashy friends of mine
Would find it rather hard
To pay for coats they're wearing now,
At " two pounds ten per yard."

But as for me, I wish I had
My silver dollars back,
I'd recollect my fathers' ways
And tread the same old track ;
I'd never do as I have done,
Risk hundreds on a bet,
Nor be obliged so oft to cry
" Clean pockets here to let."

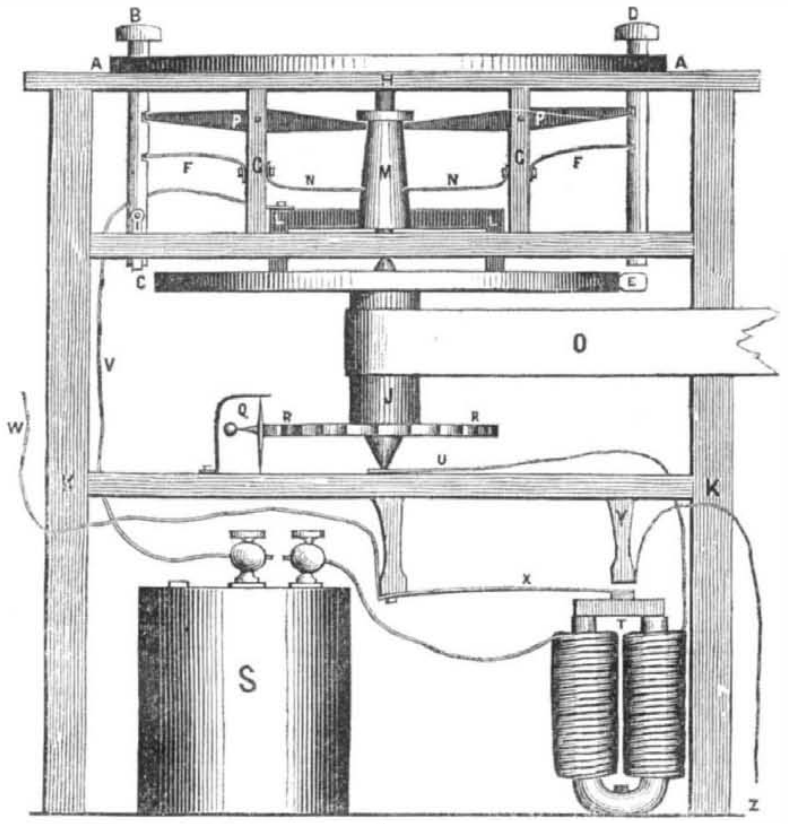
Patrick to his Sweetheart.

You're a broth of a creature,
In form and in feature—
It's meself that now tells ye that same,
And sure, now in troth,
I'll not be very wroth,
If you'll plaze me by changing your name.

The Kiss.

Thanks to my gentle, absent friend,
A kiss you in your letter send ;
But ah, the thrilling charm is lost
In kisses that arrive by post !
That fruit can only tasteful be,
When gathered, melting from the tree !

LETTER PRINTING TELEGRAPH.---Figure 1.



EXPLANATION.—In arranging the several parts of this machinery, it has been our object to render conspicuous the connection of each part, rather than to show the most favorable positions and proportions of each The most essential principle embraced in this invention, is a peculiar method of measuring accurately, very small sections of time ; and this is done by a minute verge, ball or balance and spring so constructed as to beat 60 vibrations per second, by a verge which has 28 teeth, and consequently revolves 130 times per minute. Without stopping to give a more particular description of this escapement, we shall proceed to describe the other parts of the machinery of Fig 1. On the cap or head of the frame A A, is a horizontal circular dial, near the periphery of which are arranged in circular order twenty eight vertical and depressible metallic pins with flat circular heads, two only of which B C and D E, are represented. These are called keys, on account of their resemblance to keys of musical instruments. The 28 key heads contain the 26 letters of the alphabet, a star and one blank. These key-heads are ordinarily elevated about a quarter of an inch above the dial, being held up to that position by the springs F F, which are attached to the post G, between the keys and the centre post H. The bottom of each key passes through another parallel circular plate a few inches below the dial ; and to the side of each key near the bottom, is attached a thin spring I C, with a small hook or catch near the bottom, so arranged that when the key is depressed the catch springs out from the key, and taking to the under side of the plate, prevents the return of the key till relieved from this restraint. Immediately below the plate, is a horizontal stop-wheel C E, mounted on a central shaft J, which is supported by the cross bar K K. This wheel has 28 arms, or 28 apertures through its disk, and is ordinarily restrained from motion by two branches or prongs L L, which project from a hollow central shaft M, which occasionally slides vertically upon the centre post H : the branches forming an angle at L, descend through the plate and into the interstices of the stop-wheel C E. —The sliding shaft N, is slightly pressed down by the springs N N, which are attached to the posts G ; and the springs F and N are connected together by screw bolts, so as to form a metallic connection between the keys and the stop-wheel ; they all being made of brass or other metal : and the stop-wheel is occasionally put in motion by the belt O (or by geer work if preferred) which is driven by a wheel, which is impelled by a weight or spring, and has a constant tendency to move when unrestrained. A series of horizontal levers P P, are mounted centrally on the posts G, and extend from the keys to the sliding shaft. A projection called the *stop* (shown at E) is attached to the periphery of the stop-wheel : and when any one of the keys is depressed, the sliding shaft with its branches are elevated by the levers, and the stop-wheel being thus liberated, is put in motion till the stop strikes against the bottom of the catch-spring of the depressed key, whereby the key is instantly elevated to its ordinary position ; and if no other key is depressed, the branches descend at the same instant, and prevent the further motion of the wheel until again elevated by the depression of a key. Thus it will be seen, that the operator having depressed one key, is not required to hold it down, nor to wait for the stop to strike it before another is depressed ; but may proceed and depress any number in the direction of the motion of the wheel, but must not overtake or pass over the stop in its progress. The motion of the stop wheel is regulated by a scapement Q which plays upon the scapement wheel R R. A battery S, and magnet T, are attached to the machine ; and the circuit extends from the battery through the helical coils of the magnet, and thence via. the plate U which supports the centre shaft, the stop-wheel and branches (or key, springs, sliding shaft and branches) and thence by the wire V, to the battery. The main telegraph circuit is supposed to pass via the wire W, the armature spring X, the metallic stud Y, and the wire Z. It will be seen that the battery circuit is ordinarily closed, and that consequently the armature T is kept in contact with the magnet, whereby the telegraph circuit is broken between X and Y. But at the instant that the battery circuit is broken by the depression of a key, the telegraph circuit is closed by the force of the spring X, and continues closed till the stop comes in contact with the depressed key. This machine is for making a telegraphic communication ; but the machine for receiving and registering the same at another station, is represented in Figure 2, on page 140.

LIST OF PATENTS

Issued from the 1st of January, 1847, to the 16th of January, 1847, inclusive.

To Winant de Garmo, of Northumberland, New York, for improvement in attaching Traces to Whiffletrees, (having assigned his right to William S. Ellison.) Patented Jan. 1, 1847.

To Jean Babtiste Gendebein and Auguste Houyet. of Brussels, Belgium, for improvement in Flouring Mills, (having assigned the right, title and interest to J. Burrows Hyde of New York.) Patented Jan. 5th, 1847, and ante-dated 11th of February, 1846.

To James Montgomery, of Memphis, Tennessee, for improvement in Spark Arresters Patented Jan. 7th, 1847.

To John R. Remington, of Baltimore, Md., for improvement in Coffee Roasters, Patented Jan. 7th, 1847.

To Miles G. Simril, of Chesterville, South Carolina, for improvement in Tailors Measures. Patented January 7th, 1847.

To Alonzo Heaton, of Irving, New York, for improvements in machinery for Raising Sheet Metal. Patented January 13th, 1847.

To Isaac Crossett, of East Bennington, Vermont, for improvement in Knives for Cutting Staves.

To James Ingram and James Stewart, of New York, for improvements in Water Closets.—Patented January 13th, 1847.

To Walter Hunt, of New York, for improvement in Fountain Pens. Patented January 13th, 1847.

To Lorenzo Prouty, executor of David Prouty, deceased, of Dorchester, Mass., for improvement in Ploughs. Patented January 13th 1847.

DESIGNS.

To Thomas Barry, of New York, for design for Stoves, (having assigned his right to Sam. H. Ransom, of Albany, New York.) Patented Jan. 5th, 1847.

To Amaziah Whitney, of Albany, New York, for design for Stoves, (having assigned his right to Sam. H. Ransom, of Albany, N. Y.) Patented Jan. 5th, 1847.

To Samuel H. Ransom, of Albany, New York, for design for Stove. Patented Jan. 5th, 1847.

To Daniel F. Goodhue and Charles Guild of Cincinnati, Ohio, for design for stoves. Patented January 13th, 1847.

To William Cresson, Jacob Beesley and David Stuart, of Philadelphia, Pa., for design for Stoves, (the said Beesley and Stuart having assigned all their right, title and interest to said Cresson.) Patented January 13th, 1847.

Full Employment.

A letter-writer in Wales mentions having seen a sturdy looking dame, with a load of wood on her head, and a child tied on her back, a cudgel under her arm, with which she was driving a number of cows, while her hands and fingers were busily employed in knitting stockings. The writer does not specify that the dame was singing devotional hymns at the same time, though she might have done it.

Overflowing.

A city editor speaks of his paper as being "full to overflowing" of interesting articles, &c.; of course, some part of the good articles—probably the *best* part—must be lost by the overflow, and thus spoil and injure the whole.

The Journal of Agriculture says, that Poland is perhaps the greatest honey producing country in the world.

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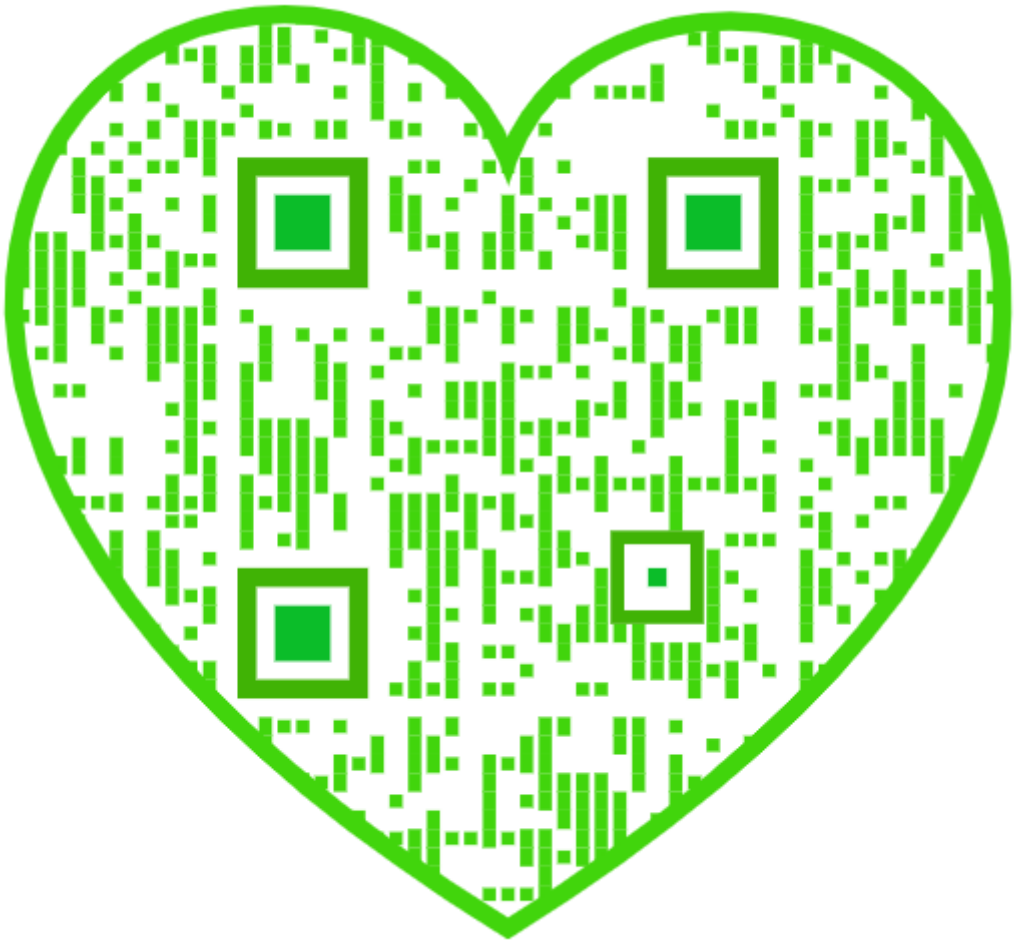

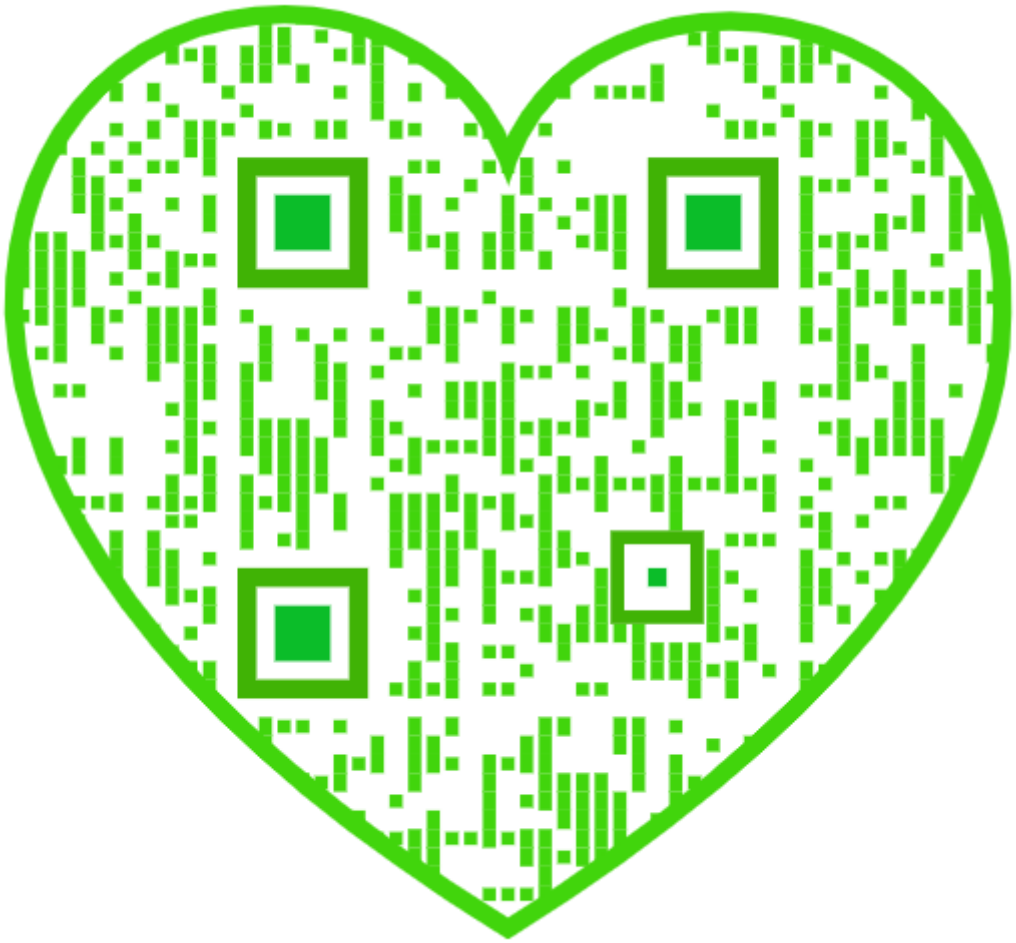

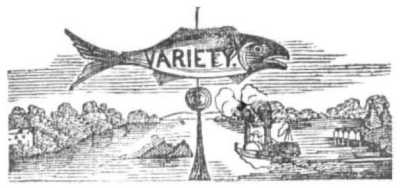

A Few more Curiosities.

(We select and insert the following, partly by request; but as the fancy museum is pretty well filled, and already (according to various accounts) contains many articles which are not worth the time required to read their titles, we hope to be excused from any more contributions.)

A tassel from the cap of a climax.

One of the legs of a multiplication table.

A leaf from the pink of perfection.

The wings and ears of a brick-*bat*.

A cushion from the *seat* of war, (recently cane-bottomed.)

"Something green," found in the eye of Yankee Doodle.

The fiery eye of a "cat in a strange garret."

A cur-*tail* of the expenses of Government.

A tooth from the "dog in a manger."

A 4th of July toast done brown.

The rat that was *smelt* by a speculator.

Sparring gloves used in *boxing* the compass.

The cloak of religion, under which poor people are cheated.

A "chip from the old block."

The shadow of a knot-hole (set in a frame.)

A wing of a "flying rumor."

The mantle of charity, (perfectly transparent.)

A frown from a "mountain's brow!"

Moustach from the "face of nature" cut off by a sharp wind.

Composition for cementing a "cracked joke."

A bottle of beer made of *cube roots*.

Sun beam found among the old timbers of an air castle.

A sample of tooth-powder made of "dry wines," neatly put up in empty boxes.

Our Force in the Field.

The Washington Union publishes the report of the Adjutant General of the United States Army, Gen. R. Jones, from which it appears that the regulars in the field, including officers and men, numbered 6,613. Troops at sea, and under orders to join the army, 1,098. Recruits *en route* for the seat of war, 762. Aggregate of regulars, 8,473. Volunteers in the field, 15,745; at sea for California, 766.—Aggregate of volunteers, 16,514; amounting in all to an army of 24,984 men. Of this number there are under the orders of Major Gen. Taylor, 18,332; of whom 7,406 are regulars, and 10,926 volunteers. Under the orders of Brigadier Gen. Wool, charged with the conduct of a separate division, 2,660, of whom 621 are regulars, and 2,039 volunteers. Under Brigadier General Kearney, also charged with the conduct of a separate division in New Mexico, 3,992, of whom 446 are regulars and 3,546 are volunteers.

Saleratus Lakes.

A letter in the Liberty (Mo.) Tribune mentions, as curiosities to be seen on the plains, springs of soda, and says:—"The Independence rock is about 150 feet high, and covers something near six acres of ground. There are engraved upon this rock between two and three thousand names. I left my name on it, July 2d, 1846. If I were to tell you that we crossed lakes of saleratus, you would scarcely believe me, but it is true; we travelled over them with our teams, and used it in our bread, and it is as good, if not better, than you buy in the States."

Broad Guage Locomotive.

One of the engines employed on the Great Western railroad, has performed 193 3-4 miles between Exeter and Paddington in 211 minutes, in one instance, and 214 in another, with a train of 140 tons besides the weight of engine and tender, which added 56 tons more with a full supply of coal and water. This engine has 8 feet driving wheels, 24 inch stroke, 8 inch cylinders, 15 1-2 feet length of tubular boilers, and weighs 36 tons without water; the tender 10 tons more, and when loaded, the whole gives an adhesive power of 56 tons.

Massachusetts.

The report of the treasurer of Massachusetts represents the financial condition of the State as very favorable. The actual revenue of the past year is over $14,000 more than the ordinary expenditures; and there remains a balance of cash on hand of $8,558 57, after having paid the balance of money borrowed in 1845, which was due in January, 1846. The State appears to be out of debt, except on account of its subscription to the Western railroad of $1,000,000, due in 1857, and its loans to various railroad corporations of about $5,000,000. The Massachusetts School Fund now amounts to $830,600, and has increased $77,000 during the last two years.

Washington City.

The public grounds at the capitol comprise 540 acres, as follows: President's Square, 83 acres; Park 28 acres; Capitol Square and mall, 227 acres, other squares, 202 acres. The Government has expended there, since 1800, the sum of $10,035,454. The President's house and treasury buildings, each, cost $700-000. The patent-office and general post-office, each, $500,000.

Retort Courteous.

One of our young bloods, dining at a fashionable hotel, was requested by a gentleman to pass some article of food which was near him.

"Do you mistake me for a waiter?" said the exquisite.

"No, sir, I mistook you for a gentleman," was the reply.

No License at Pittsburg.

Every ward in Pittsburg, Penn., has lately given a majority of votes against licensing the liquor traffic. The large liquor dealers, it is said, will contest the constiutionality of the law which allows the people to vote against licenses.

Extraordinary Casualty.

We learn from a Philadelphia paper, that while a train of cars was passing Mill Creek, on the Reading railroad, about nine miles from the city, the boiler exploded, killing instantly all the hands on the train, seven in number.

Lady and Gentleman Compositors.

A Worcester (Mass.) paper advertises that a gentleman or *lady* compositor may find employment at the *case*, by application, &c.—Most ladies in most places are more or less accustomed to pillow cases and card cases, but would esteem it a hard case to be employed at a printer's case.

Scientific Toast.

A Massachusetts lady sent the following toast to the celebration of the N. E. Society at Chicago:—"Benjamin Franklin and Professor Morse—Sons of the old Bay State; the one drew the lightning from heaven, the other gave it voice and bade it speak to the world."

Very Generous.

It is confidently asserted that the laboring Irish men and women in and about New York, have within the year past, contributed one hundred and eight thousand dollars (108,000,) for the relief of their suffering kindred in Ireland.

Smiling Fortune.

Miss Deming, the danseuse, has found an uncle in Louisiana very rich, and at his special request, she has left the turmoil of the stage for the ease and elegance of private life in the house of her wealthy relative.

Scampering Ashore.

When the ice in the Genesee above the Falls began to break up last week, there were about 150 boys skating upon it. They hurried to the shore, and in a few minutes the ice was tumbling over the Falls.

Yale College.

The number of students is 584, viz. 52 law, 53 theological, and 52 medical students, 5 resident graduates, and 422 under graduates. Of the last named, 121 are in the senior, 90 in the junior; 112 in the sophomore, and 99 in the freshman class.

Great Arrival—Expected.

Gen. Tom Thumb was to embark with his miniature carriage and four ponies, in the steamer Hibernia, at Liverpool, on the 4th instant, and probably has arrived at Boston.

Attractive Influence.

It is rather novel to the senses, and the common conceived opinions which we instinctively have formed, that it is only by the attraction of aggregation that particles of metals are held together in what is called a solid state, although philosophically speaking, there is no solidity about it. "These particles approximate with infinite nearness, and yet never touch one another. The cavities of the metal are filled with innumerable globules of air, and the application of heat expanding the air, drives the metallic particles asunder, in proportion nearly to the quantity of heat applied; so that if the heat be raised to a very high temperature, the hardest steel that was ever manufactured may, under the action of a blow-pipe, be reduced to an impalpable powder, lighter than the atmospheric air, and will float in that medium like the small dust of the balance in the beams of a summer's sun."

It is the same Drunk.

An old drunken negro who was very noisy, was threatened with a severe punishment if he ever got drunk again and made such a noise. A few days after, he was found drunk, and the boys were around him making a great riot.—Cæsar was called up before the magistrate and asked if he did not remember what was told him. "Yes, massa." "Well, what was it, Cæsar?" "Why, massa, if Cæsar got trunk again, he have twenty lashes on his back."—"Well, Cæsar, then you must take them."—"No, massa." "Why not, Cæsar?" "Cause, massa, I is not trunk again. It be the same trunk, massa—Cæsar been no sober since."

Federal Relations.

A member of the Iowa Legislature was highly indignant at the Speaker of the House when he announced him a member of the committee on "Federal Relations." He considered it a rank, biting insult. "Look here, Mr. Speaker," said he, "none of your tricks upon travellers. You needn't think that, because I am a new member, you can run your rigs upon me. I am not as green as you suppose. Go to thunder with your *federal relations!* I haven't one of them in the world, and wouldn't own him if I had."

Elegant Printing.

To any of our friends who may require the printing of cards, show-bills or pamphlets, or any variety of plain or fancy printing, we can confidently recommend the printing establishment of Mr. J. Hall, No. 49 Fulton street—a place at which such work is done not only in elegant style and at low prices, but *promptly*, and without trying the patience of customers by calling several times for their work before it is ready.

The Coal Trade.

The Reading Railroad Company sent 1,233,561 tons over the road last year, being only 16,438 tons less than the managers estimated the capacity of the road. The quantity sent to market from all the regions in 1846, is in round numbers 2,228,000 tons, against 2,053,633 tons in 1845, being an increase in 1846 of 312,000 tons.

The Poor Man's Luck.

A poor laborer in New Haven not long since bought a lottery ticket in the forlorn hope of bettering his condition: but before the lottery was drawn he was so hard beset by a creditor to whom he owed a few shillings, that he was constrained to surrender his ticket to secure the debt. This ticket soon after was turned up a prize of $10,000.

Right and Left Boots

A Mrs. Boot is advertised as having forsaken her husband and home. It is supposed that Mrs. Boot is *right*, although her husband, Mr. Boot, is *left*.

Rhode Island Arms.

The Adjutant General has recently reported to the Legislature the number of arms and equipments in the possession of the militia of that state, namely 13 field pieces. 630 muskets, 496 bayonets, and 318 pistols!

Mind your Points.

About one half of our correspondents write without either periods, commas or capitals, which renders their communications—especially descriptive ones—difficult to understand, however correctly the letters may be formed. We hope they will learn better

LATE NEWS.

Intelligence from Mexico three or four days later than that reported in our last number, has been received. The prospect of an immediate battle has been dissipated; the advancing army of 30,000 Mexicans, with Santa Anna at their head, turns out to be a small army of observation, of only 2,000 or 3,000.—Gen. Taylor, after returning to Saltillo, resumed his march in the direction of Victoria. Gen. Wool's division had arrived at Saltillo, and arrangements are made for its permanent occupation. There is no intimation of the intention of Santa Anna to leave San Luis Potosi at present.

The Message of the Mexican President to Congress has been published, in which is manifested a firm determination to reject all propositions of peace, or foreign interference, while any part of Mexico is occupied by the American forces, although he admits the comparatively defenceless state of the country.

The Columbian Magazine.

The Columbian, Ladies' and Gentlemen's Magazine for February, has been issued in style and splendor of embellishments unsurpassed. The mezzotinto of "Cross Purposes,' steel plate of "Curiosity," and "La Sylphide," as a plate of fashion, to say nothing of the music of "Away on the stormy sea," must produce a regular rush for this number. But we trust the publisher—Israel Post, 140 Nas-Nassau st—will be able to meet all demands at the usual moderate prices.

Large Order.

Mr. Charles I. Dupont, of Wilmington, Del. has received an order from Government for sixty thousand yards of blue cloth for the army.

A panther, measuring eight feet in length, was shot in his den last week, in Rockland, Sullivan Co., by Messrs. Amos Sheeley and A. P. Appleby.

During the late flood in Ohio, many of the people of Dayton had to leave their houses in the night and resort to the hills; and when daylight appeared, their houses were almost covered with water.

An English judge has laid it down as a principle of law, that a physician is not entitled to payment if the patient dies under his treatment.

Lieut. L. B. Washington, of the Virginia volunteers, is said to be a descendant of Gen. Washington, and wears the sword of his great ancestor.

A single drop of the oil of lavender put into a bottle of ink, will prevent its moulding for any length of time.

During the past year, 208 dwellings were erected in the city of Washington, D. C. The total number of dwellings is 5,765.

The tenth company of Massachusetts volunteers has been organized, and the whole force from that State is ready for sea.

A young man man at Pittsburg has been killed by the accidental discharge of a pistol charged with gun cotton.

It is reported that a fashionable mother has forbidden her daughters to study arithmetic, because many of the fractions are *vulgar*.

The Colporteurs in France are said to have distributed thirty thousand copies of the Bible within the last three months

The bathing place of the Pilgrims in the River Jordan, is nearly 1260 feet *below* the level of the Mediterranean!

A man convicted of murder in Louisiana, has been sentenced to 99 years imprisonment in the Penitentiary.

Hon. Zadock How, of Billerica, Mass., has been selected as one of the councillors of that State, but has declined to accept that office.

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JANUARY 1847.

How keen the breeze is—
Dear me! it freezes—
Old Winter teazes
Both young and old:
Wild storms commingle;
The sleigh-bells jingle—
And fingers tingle
With pinching cold.

Wile storms commingling,
And fingers tingling,
And sleigh-bells jingling,
Will have their day;
Sweet summer flowers,
And woodbine bowers,
When winter lowers
Must pass away.

Though summer flowers,
And verdant bowers,
When winter lowers,
Must fade and die;
The blooming faces
Of Nymphs and Graces
Afford no traces
Of his potency.

The Ladies—(bless them!
May bliss caress them,
And nought distress them,)
Are still as fair,
As when mild May-day,
That lovely gay-day,
Was in its hey day,
And "debonnair."

With spirits bounding,
And mirth resounding,
The *gay* are "rounding"
At fashion's call;
Bright eyes are beaming,
Fond hearts are dreaming,
And others "steaming"
At feast or ball.

The season rolls on,
The winter howls on,
The tempest scowls on,
And on we go;
As winter's rolling,
And tempest howling,
And all are scowling,
Wind, rain and snow.

Prompt Decision.

Two of the Harrisburg recruits, while waiting for the steamboat at Pittsburg, formed acquaintance with two young ladies, with whom they forthwith visited an alderman, and were married: Mr. George Simons to Miss Melinda Johnson, and Mr Thomas Clendennin to Miss Sarah Irvine. All parties left next day for the seat of war.

A dangerous Rock.

Capt. Houschildt of the barque America, on the 1st of September, discovered a rock in the Gulf Stream, projecting above the water about thirty feet, and being, as he supposed, about 250 or 300 feet in circumference. The latitude of the rock is 40 deg. 20 sec., and the longitude 63 deg. and 50 sec. As this rock lies directly in the track of vessels bound from this port to Europe, it would be well for navigators to be on their guard.

Tampico.

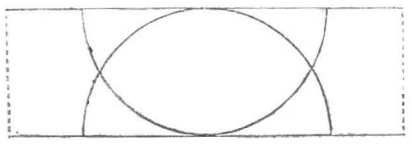
No spiritous liquors are allowed to be landed at Tampico The positive instructions of the Major-General commanding the U. S. troops in Mexico, are:—"That no person, whether a sutler or private dealer, shall sell spiritous liquors to any individual under any pretence whatever, so long as the troops shall continue to occupy any military position in Mexico."

The Weather.

They are complaining of the warm weather at the South. The Wilmington, N. C. Journal states that the peach trees are in blossom in that city. The Charleston Evening News says: "One of the most remarkable seasons has marked the present winter of any recorded in meteorological annals, in this portion, at least, of Carolina. The air has now, while we write, the balminess of spring: flowers and fruits are putting forth their blossoms—the verdure, in short, of Nature, in her vernal dress, is all around us."

Editor Scientific American.

Dear Sir,—The enclosed sketch, as you will perceive, is composed of two semicircles which are supposed to be two wires or strings, which when extended or straightened, makes the parallelogram which encloses them.



By measurement you will ascertain that the square contains the same surface as the two half circles combined. Is this not a sure method of squaring the circle. G. W. P.

The above diagram furnishes a curious and interesting illustration of the area of the circle; but to reduce it to a square—multiplying the length by the breadth and extracting the square root,—is neither more nor less than the ordinary process.—Ed.

To the Editor of the Scientific American.

Sir—Did the idea never occur to you that a boat or water wagon could be made by using four hollow cylinders for wheels of sufficient capacity and buoyancy enough to support the frame or body, entirely out of water. (a) And if the rim of these wheels was armed with floats or paddles and put in motion by steam, they would pass through the water with less resistance than any other contrivance? (b) I have only tried one wheel, by which I learned that it would, in my opinion, answer the purpose, particularly for ferriage and running in smooth water with little power and great speed.

Unfortunately I am not a mechanic, draftsman, nor subscriber to your paper, (c) consequently you cannot expect to receive a very lucid idea of what I mean. (d)

If such a machine will answer at all, it would be able to run from New York to Albany in one half the time now consumed. (e) It is an old contrivance of mine, which has been packed away in a lumber room of various machines that have occupied my mind for a number of years, and since I have concluded to write to you (which has not been over half an hour,) I have not time to hunt up and explain the things in detail, which I think I can do if questioned. (f) If it is not an old exploded idea of yours or some one else, and any more information is wanted, even to a small working model, I can give it.

Any paper or communication addressed to Box —(g) will find the author.

Let it be good or bad, a good drawing of it would amuse your readers, as might fifty others that I could furnish the idea of, many of which I have no doubt would be useful to the world, as many of the late inventions were conversant with me years ago. —— ——

Answers and Remarks

(a) Yes: rolling, floating hollow cylinders have frequently been spoken of.

(b) No sir; it has not occurred to us that this contrivance would "pass through the water with less resistance," &c. The fact is, there could be no advantage gained by the rolling motion; and consequently the resistance would be as great as if the cylinders were to be dragged sideways through the water.

(c) We thought of that; for if you had been a subscriber and reader, you might have escaped such errors and loss of labor by learning the principles of mechanical science.

(d) Your ideas are quite clear and need no apology.

(e) That is very true; but that lucky if in the sentence should be well emphasized. It would not answer at all.

(f) It might be well to give them an overhauling; there may be some valuable ideas latent among them, which should be liberated. The brightest jewels are sometimes found among rubbish.

(g) We suppress the name of the box, and if our correspondent had not been afraid to trust us with his name, we should not have inserted his residence. —Ed.

To the Editor of the Scientific American.

I wish to suggest an improvement in the Merchant's Exchange, (where I was last week, but could not hear in consequence of the sound of the auctioneers' voices being thrown back in such sonorous discord,) and all public rooms built with the same inconvenience, which is to have the sides hung with muslin, and, if required, a net-work, forming an intermediate ceiling, which will deaden the speaker's voice so that it may be distinctly heard in any part of the room; a few dollars' worth of common muslin would test the utility of my suggestion.

I have no doubt but an intermediate muslin, or net-work ceiling (if light is required from above) would answer the purpose. The proper position can be attained by rising or lowering the same.

Your insertion will oblige your subscriber.

H. A. S.

Williamsburgh, North 2d st.

To the Editor of the Scientific American.

Since reading of the disastrous freshets and the loss of Canal Aqueducts, it occurred to me that the recurrence of such an event might be obviated by the following arrangement:

Let locks be constructed on each side of the River, and cast iron pipes in sections be laid under the bed of the river terminating inside of the inner gates of both locks, making an inverted syphon; the water would rise equally high in the canal on either side of the river. Boats lowered in one lock may cross if it be a current river, by attaching ropes to the shore some distance above, and placing the boat's bow inclined upward at such an angle with the current as to be propelled to the opposite lock, and elevated, requiring very little more time than in crossing an aqueduct. If the above be considered practicable and economical, or not, I would like to be informed through your columns. J. E. V.

Cincinnati, Jan. 11, 1847.

Answer.—The idea of the inverted syphon is ingenious, and good as far as it goes: but the expense of an extra lock on each shore,—the difficulty of entering the boats when the current is rapid, and the loss of time by locking and ferrying, would be weighty considerations against this plan, even if the pipes were large enough to feed the lower section.

TO CORRESPONDENTS.

"J. P. A. of N."—The premises of your problems are not well defined. It depends on length and velocity as well as power and capacity. Try again.

"C. C C. S. of B."—We could judge better of the utility of your "bellows" by seeing a plan of it, than by the simple expression of your own opinion. Send us a sketch or description, (with full name) and we will do you justice.

"E. G. of P."—Your plan for a paint mill is decidedly ingenious, and would operate well; but the public being already well supplied with very good articles in that line, and even more simple and cheap than yours, we may not think it expedient to procure engravings to illustrate it. It is difficult to procure patronage for any new invention, unless the immediate utility and demand for it is conspicuous.

Rotary Steam Engine. We find on our table a drawing and description of what purports to be a rotary engine; but not finding any name annexed, whereby to know to whom we are indebted for the favor, we shall say no more about it at present

"J. H. of S. H."—We know of no method, and we are confident that no method has been discovered, of producing a current of electricity from the earth, without the exertion of mechanical motion. If a helical wire is made to revolve rapidly round a straight wire, the two ends of which are inserted in the earth, a current of electricity is produced of moderate intensity. It does appear reasonable and probable, that if one end of a wire is attached to a very large plate of zinc, and the other end to a plate of platinum, and both plates buried in the earth, a current of galvanic electricity would be produced of sufficient power to give motion to a clock, through a full-sized electro magnet, and a delicately balanced armature, arranged on the principle of the vibrating armature of Smith's electro magnetic machine for shocks. But the zinc plate would become corroded and eventually destroyed, though it might last several years.

"W. B. C. of M."—Your package is received, and a reply shall be made soon. Inform D D. M. that Mr. S. has not returned to the city yet, but is expected daily.

"J. E. V. Z. of Cincin. Ohio."—You must look to the persons to whom you paid your dollar for those 34 numbers of old volume. We can furnish them however.

Accuracy of the Bible.

An astonishing feature of the Word of God, is that, notwithstanding the time at which its compositions were written, and the multitudes of topics to which it alludes, there is not one physical error—not one assertion or allusion disproved by the progress of modern science. None of those mistakes which the science of each succeeding age discovered in the books of the preceding; above all, none of those absurdities which modern astronomy indicates in such great numbers in the writers of the ancients—in their sacred codes—in their philosophy, and even in their finest pages of the fathers of the church—not one of these errors is to be found in any of our sacred books.—Nothing there will ever contradict that which, after so many ages, the investigations of the learned would have been able to reveal to us, on the state of our globe, or that of the heavens.

Peruse with care our Scriptures, from one end to the other, to find there such spots, and whilst you apply yourselves to this examination, remember that it is a book which speaks of everything, which describes nature, which recites its creation, which tells of the water, the atmosphere, of the mountains, of the animals and of the plants. It is a book which teaches us the revolutions of the world, and which also foretold its past. It recounts them in the circumstantial language of history; it extols them in the sublimest strains of poetry, and it chants them in the charm of glowing song. It is a book which is full of oriental rapture, elevation, variety and boldness. It is a book which speaks of the heavenly and invisible world, whilst it also speaks of earth and things visible. It is a book which nearly fifty writers of every degree of cultivation, of every state, of every condition, and living through the course of fifteen hundred years, have concurred to make. It is a book which was written in the centre of Asia, in the sands of Arabia, and in the deserts of Judea, in the court of the temple of the Jews, in the music schools of the prophets of Bethel and Jericho, in the sumptuous palaces of Babylon, and on the idolatrous bank of Chebar, and finally in the centre of Western civilization, in the midst of Polytheism and its idols, and in the bosom of pantheism and its sad philosophy. It is a book whose first writer had been forty years a pupil of the magicians of Egypt; in whose opinion the sun, the stars, and the elements were endowed with intelligence, reacted on the elements, and governed the world by a perfect alluvium.

It is a book whose first writer, preceded, by more than nine hundred years, the most ancient philosophers of ancient Greece and Asia; the Thaleses and the Pythagorases, Zalucuses, the Xenophens, and the Confuciuses. It is a book which carries its narrations even to the hierarchises of angels; even to the most distant epochs of the future, and the most glorious scenes of the last day. Well, search among its fifty authors, search among its sixty-six books, its 1,189 chapters, and its 37,723 verses, search for only one of these errors, which the ancients and moderns committed, when they speak of the heavens or the earth, of their revolutions, of their element—search, but you will find none.—*Selected.*

Recent Fires.

At Frankfort, Pa., the calico print works of Briggs and Quickshall, valued at $20,000, was consumed on Friday of last week.—At Mathews mills, in Manlius, N. Y., the dwelling-house and carpenter's shop, owned by Cyrus P. Camp. Loss, $500.—At Hartford, N. J, a grist mill, owned by Horace Mann.—On the railroad at Aikin, S. C., a train of railroad cars, containing two hundred and twenty-five bales of cotton were destroyed on the 5th instant.—At Charleston, S. C, the dwelling-house of Mr. C. Rankin, with its contents, was consumed, and a girl 13 years old perished in the flames.—At Milwaukie, Wis., three or four houses, in one of which was the grocery of Wallbridge & Co. The clerk, Mr. Bishop, is supposed to have perished.—At Preston, Ct., Mr. Cook's woolen mills, valued at $7,000, partly insured.

At Norfolk, Va., on Saturday last, several buildings, including valuable stores, on Market Square and Main street. Loss estimated at $12,000.

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NEW INVENTIONS.

A Valuable Patent.

Reported for the Scientific American by Z. C. Robins.

For an *Improvement in prepareng Grain for Flouring*, patented by J. W. Howlet and F. M. Walker,* of Greensboro' N. C., Oct. 14, 1846. This is for an improved process of toughening the hulls of wheat or other grain, by passing the same through a jet or current of steam immediately preparatory to grinding. The patentees say :—

"The utility of toughening the hulls of grain in some way previous to grinding, and also the difficulty of effecting this desideratum uniformly, is well known to practical millers. When grain is ground in too dry a state, the hulls are so tender and brittle that a portion of them are pulverized and pass through the bolt with the flour ; disfiguring its appearance and greatly deteriorating its merchantable value."

Claim—"What we claim as our invention and desire to secure by letters patent, is the method or process of toughening the hulls of wheat or other grain preparatory to grinding, by the applicatian of steam, substantially in the manner and for the purpose herein set forth."

* Haley Brown, Brumel's P. O. Davidson Co., N. C. has become the owner of the patent.

Claims to New Patents.

BY J. S. SILVER.

Dec. 28, 1846.

Improvement in Cooking Stoves.

What I claim therein as new, and desire to secure by letters patent, is the special arrangement and combination of the respective parts thereof, as herein set forth, that is to say: I claim the combining of the two ovens or boiler spaces B B, situated on the sides of the fire chamber, with the rear oven, H, the draught from the fire chamber descending and passing under the partition plates E E, on its way to the exit pipe ; and the space I, under the rear oven being heated by means of the heated air from the air chamber O, under the fire grate, the whole being constructed substantially as herein set forth.

—

BY SAMUEL COPE.

Dec. 22, 1846.

Improvement in Self-acting Carriage Brakes.

What I claim therein as new, and desire to secure by letters patent, is the manner in which I have combined the brake with the spring carriage by means of ahe arms D D, of the straps or rods *d d*, connecting the brake shaft with the hind axle of the strap H, connecting the break shaft with the fore cross bar B, through the intermedium of the spring I and the strap J J made fast to the carriage body, and to the swingle tree, so as to operate in the manner set forth. I do not claim either of the above named parts individually, but I limit my claim to their combined arrangement and operation, as herein fully made known, and this I claim whether the respective parts be formed precisely in the manner described and represented, or in any other that is substantially the same, producing a like result by equivalent means.

—

BY EDWIN KEITH.

Dec. 22, 1846.

Improvement in Cotton Gins.

What I claim as my invention and desire to secure by letters patent, is placing the mote brush where the rotating stripping brush acts on the teeth of the saws, substantially as described, so that the mote brush shall act on the fibres to separate the motes as the rotating brush strips the fibres from the teeth of the saws, as described.

—

BY BENJAMIN SHEPARD.

Dec. 23, 1846.

Improvement in heating Stoves.

What I claim is the combustion of the back plate F, and one or two elongated air passages, pipes or ducts D D, with the drum or casing A, entirely surrounding them as set forth, the said elongated air ducts and back plate constituting together the whole or part of a chamber or space for the fire or combustion of the fuel, and the said casing or drum forming with the said ducts and plate one or two smoke passages E E, around the exterior of the air ducts, the smoke being caused, as it leaves the fire, to move towards the front or fire door end of the stove, thence to circulate between the outside casing and the air ducts, as specified. And I also claim the above described combination and arrangement of the air drum K K, with the chamber of combustion beneath it, and air pipes leading through said chamber, and smoke flues or passages made either partially or entirely around the drum K K, as above represented and explained.

—

BY GEORGE W. EDELMAN.

Dec. 22, 1846.

Improvement in Machine for Calculating.

What I claim as my invention, is the combination with the liberating latch E and stop G, herein before described, of the several machanical devices herein described, for operating the count wheel, so as to adapt the instrument to the purpose of counting in the process ef addition without requiring the eyes to be turned from the figures.

—

BY HEZEKIAH AUGUR.

Dec. 23, 1846.

Improvement in Machines for Carving.

I do not claim the horizontal movements of the carriages, as herein described, in themselves, (they having been before known and used) but only in combination with the other parts and movements of the machine. Nor do I claim the using of a pattern, or the operation of the cutting tool and guide, as such, nor any other part which has heretofore been used.—But what I do claim as my invention, and desire to secure by letters patent, is the circular adjustable chucks, by means of which the cutting tool can be made to operate, not only on a greater variety of surface, but also with much more accuracy and dispatch, as well as convenience. And I also claim the manner in which I have arranged and combined the several parts and movements of the machine, to wit : combining two lateral motions of the carriages, at right angles, with the motion to incline the tablets and the manner of shifting the chucks in the course of the operation, so as to bring all parts of the surface, (except the bottom) of the block, or material to be carved, equally within the operation of the cutting tool, while the cutting tool is governed by the guide working on the pattern ; thereby enabling the workman to carve five sides of a cubical figure, and consequently to carve all parts (except the bottom) of irregular figures generally, by the machine, operating substantially as herein described.

—

BY JOHN R. REMINGTON,

Dec. 22, 1846.

Improvement in Coffee Pots.

Having fully described the nature of my improvement, what I claim as new therein, and desire to secure by letters patent, is the connecting a resesvoir having a double bottom, as described , with the coffee pot in the manner described, by means of a safety valve constructed substantially in the manner and for the purpose set forth.

—

BY CHARLES RAEDER.

Dec. 28, 1846.

Improvement in finishing raw hide Whips.

What I claim as my invention, and desire to secure by letters patent, is the process herein described of finishing raw hide whips, viz. submitting them to heavy pressure in suitable dies, and subsequently smoothing them by planing, by suitable planes, all as is herein described.

—

BY LORENZO PROUTY, EXECUTOR.

Jan. 13th, 1847.

Improvement in the Plough.

What is claimed as the invention of the said David Prouty, and is sought to be secured by letters patent, is the adjustable and shifting wing or wings, in combination with the mould board, as described, by means of which the same plough can be adjusted to the cutting of furrows of different widths, as set forth.

—

BY WALTER HUNT.

Jan. 13th, 1847.

Improvement in the Fountain Pen.

What I claim as my invention and desire to secure by letters patent of the United States, in the above described Fountain Pen, is the filling tube of a graduated capacity for filling the pen, combined with the fountain pen, as above set forth and specified, or arranged in any manner which is substantially the same.

—

BY HENRY BLODGETT.

Jan 15, 1847.

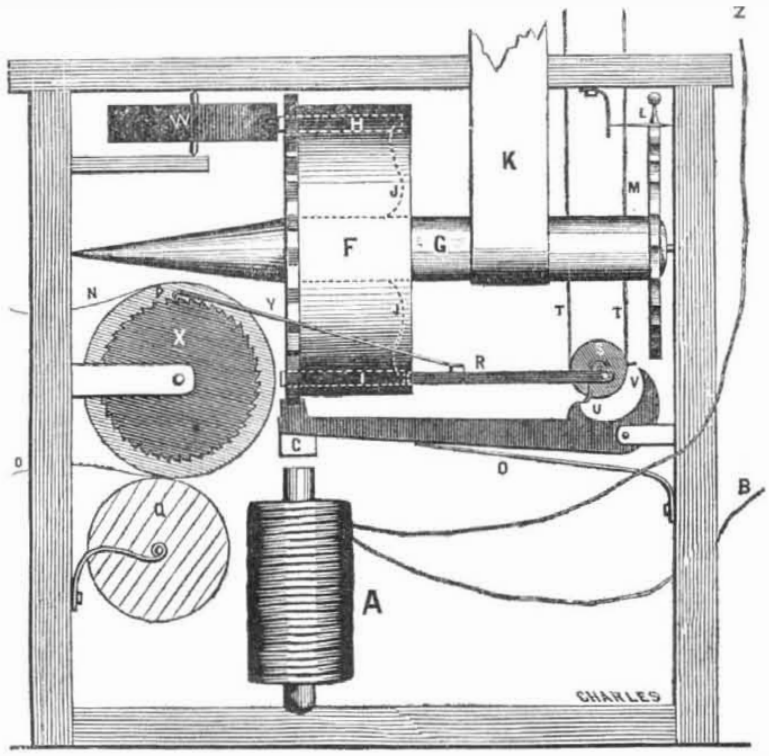
Improvement in Shower Bath.

What I claim as my invention and desire to secure by letters patent, is the mode in which I have constructed and arranged the filling passage and the rose, as herein set forth and described—both being at or near the top of the fountain when erect—it being understood that I do not intend to confine my claim to the case where the partitions enclosing the empty cavities marked *p* and *q* are introduced, these latter not being absolutely necessary to, although greatly improving the action of the apparatus. And in combination with the above I claim placing ths gudgeons upon which the fountain turns above the centre of the cylindrical water receptacle : and adding a counterweight *i*, to the bottom of the latter, so as to cause the apparatus to right itself after immersion.

I also claim the peculiar manner in which I have arranged the escape passages *d* and *e e*, so as the more readily to cut off the water when the fountain commences to rise from its inverted position, and thereby prevent its spouting to the front.

And I further claim the mode of producing the douche, by means of the cover K K, applied over the rose, the whole being constructed and operating substantially in the manner and for the purpose herein set forth and described.

LETTER PRINTING TELEGRAPH.---Figure 2.



Explanation of Figure 2.—The telegraph circuit passes through this machine, being received by the wire *Z*, and passing through the coil of the magnet A, passes off by the wire B. The electric current in the telegraph circuit is supposed to be suspended, and consequently the armature C is elevated from the magnet by the spring D applied to the armature helve. To the upper side of this helve, immediately over the armature, is attached a wedge shaped projection E, which is also denominated a stop, because it stops the motion of the cylinder F, by coming in contact with a series of 28 teeth or cogs which project from the periphery of the cylinder.—These teeth as well as the stop, are wedge-shaped, and being sharp at the ends, the stop when it rises is very certain to pass between some two of the teeth. The type cylinder is about two inches in diameter, mounted on a horizontal shaft G, and contains 28 types, two only of which are represented by the dotted lines H and I ; these types are arranged circularly, just inside the periphery of the cylinder, and with sufficient space between them for the arms to connect the periphery to the shaft. A wire spring represented by dotted lines J J, extends from the shaft to each of the types, and serves to return it to its position when it has been pressed forward. The cylinder, when not restrained by the stop, is put in motion by a belt K, which communicates with another wheel impelled by a weight or spring. The motion of the cylinder is regulated by means of a verge L, which plays into a scapement wheel M, which has 28 teeth, and revolves at the rate of 130 times per minute.—The strip of paper N O, is drawn from a roll not represented, and passes over the register, roller P, passing between that and the friction roller Q. A horizontal punch R, is attached to a pivot at the end of the punch-shaft S, a little below the centre, and extends to the type cylinder and nearly in contact with the head or blank end of the types. (This punch may be connected to a central crank, between the bearings of the punch shaft.) This shaft, when not restrained, is put in quick motion by means of the belt T T, which connects with a wheel driven by a weight or spring.—This punch shaft is restrained by an elastic hook U, which takes to a horn projecting from the helve of the armature; and when released from this horn by the depression of the armature, it is restrained by another horn V, which takes to a tooth projecting from the side of the horn V. An ink-roller W, is mounted in front of the types, and distributes a very soft printing ink to the faces thereof as they pass around. A ratchet X, is attached to the end of the register roller, and a hook spring Y, projects forward from a cross-bar which is attached to the punch at R, and takes to the teeth of the ratchet near P. We shall now describe its operation :—When a key of fig. 1 is depressed, the telegraph circuit is closed as before described, and at the same instant the armature of fig. 2 is attracted to the magnet, and the type cylinder is put in motion with a velocity precisely equal to that of the stop-wheel, fig. 1 When the stop strikes the key, the telegraph circuit being broken, the stop of fig. 2 stops the type cylinder, and the punch shaft being liberated, revolves at the same instant, by which the punch forces one of the types against the paper, and the spring hook taking to the teeth of the ratchet draws forward the register roller with the paper, and the punch shaft is stopped by the hook taking to the horn V It will be understood that the types are so arranged that the punch will invariably project the same letter which is on the depressed key : for by means of the wedge shape of the stop and the teeth, any variation of the motion of the scapement wheels of the two machines, less than half a tooth in a single revolution, will be adjusted when the wheels stop. The type which answers to the blank key, is a blank too short to reach the paper, and is used to space between the letters. The star is used to designate the letters which are used for numerals ; also interrogation : and when placed after a space, it signifies a change or a final close of the subject. The types are made of wood and very light : snd it is important that the inertia of the stop-wheel and the type cylinder should be exactly equal, that equal times may be occupied in moving equal distances : but if any error occurs, the attendant will readily right it. We shall put these machines in progress of construction immediately.—Ed. Sci. Amer.

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NEW YORK, JANUARY 23, 1847.

Wide Guage Railroads.

There are in England seven different rail roads constructed on the wide guage principle; —the rails being laid 7 feet apart. These are the Great Western, 118 miles ; Cheltenham branch, 42 miles ; Oxford branch, 10 ; Bristol and Exeter, 76, and Bristol and Gloucester, 27 miles ; in all 273 miles. Many are in favor of having the straight railroad between New York and Boston constructed on the wide guage, especially on account of its superior safety in running at high speed. It is much to be regretted that the first railroads in this country had not been commenced on a 5 1-2 feet guage, but it is very expensive and difficult to increase the width of a track when once laid. It appears to us that in view of the progress of improvement, that it is much the safest policy to construct all new railroads on the wide guage,—six feet at least, and the old roads would be eventually made to conform to it in self defence and for the sake of convenience.

Peace Policy.

We should recommend to the zealous advocates of peace, that instead of prolonging the present war by opposing it, (thus encouraging the Mexicans to persist and persevere) they should concentrate all their influence in procuring such a revision of the constitution, that the salaries of the President and Members of Congress shall, during the existence of war with any foreign nation, be reduced fifty per cent. If under those circumstances, our government choose to declare, or engage in a war, it will be very sure to have the confidence and united support of the people.

Gun Cotton Yarn.

Some quaint ideas have been advanced by individuals on the subject of having certain articles of dress made of the gun cotton. We yesterday indulged in the experiment of spinning a small quantity of gun cotton—a first-rate article,—to see what kind of explosion the yarn would produce. On igniting one end of the yarn, the combustion progressed at the rate of ten or twelve feet per second. We shall not be surprised to see cheap made handkerchiefs of this material, introduced and sold as curiosities.

The Silk Trade.

The annexed returns will show the increase in the manufacture of silk during the last few years in two states only.

Towns.	*In* 1845.
Canton, Massachusetts : :	5,200 lbs.
Boston, do : :	3,900
Dedham, do : :	5,200
South Woburn do : :	3,900
Needham, do : :	1,300
Northampton do : :	6,500
Mansfield, Connecticut, : :	13,200
Willington, do : :	3,800
Manchester, do : :	2,600
Windsor, do : :	1,300
Total : :	47,120 lbs.

The increase in the manufacture from 1843 to 1845 was 41,856 lbs., or nearly 800 per cent.

Enterprise at Cleveland.

It appears by a late number of the Cleveland, Ohio, Herald, that an extensive business in ship building is going on at that place. At the ship yard of Messrs. S. & A. Turner, a propeller of 350 tons, a schr. 250 tons, and also a new propeller just launched, of 350 tons. At the ship yard of Messrs. Sanford & Moses, a steamer of 600 tons, propeller of 350 tons, and two schrs. of 250 tons each. At the ship yard of Capt. G. W. Jones, two vessels of 250 tons each. At the ship yard of Messrs. Tisdale & Johnson, a schr. of 200 tons. At the ship yard of Messrs. Degroat & Co., two schrs of 250 tons each, and at other yards, 3 schrs. of 150 tons and two of 80 tons each. At Euclid a vessel of 200 tons is building, and at Black River 4 vessels of the largest class.

System of preparing Transverse Sleepers and fastening the Rails upon them.

The sleepers employed on the Dublin and Drogheda Railway, are half baulks, 12 inches by 6 inches at the junction of the rails, and intermediately half trees of larch with the bark on, not less than 8 inches by 4 inches, are placed with the round side upwards, at an average distance of 3 feet 6 inches apart. These sleepers are prepared for bearing the rails by fixing twelve at a time on a sliding table similar to that of a planing machine ; they are moved forward by steam power beneath two circular cutters, set at the given distance of the guage apart, revolving very rapidly, and which pass through the whole series of sleepers cutting at a given inclination the seats for the rails. A slight stoppage of the table takes place as each sleeper is cut in order to afford time for four drills to descend simultaneously and to pierce the holes for the pins or trenails for holding down the rails. An engine of six horse power suffices for working two of these machines, by which one thousand sleepers can be finished complete in twenty four hours, at an expense of about one penny each, instead of twopence halfpenny each, which they formerly cost by manual labor. The sleepers thus prepared, are used transversely beneath rails of the bridge, of which the sides are slightly pinched inward in finishing, so as to form a dovetail, with a joint plate with a raised rib, which is laid at each junction, and which, by using a screw pin and plate at one end and a collar-headed pin at the other, holds the rails very fast, preventing lateral and vertical motion, but permitting longitudinal action in expansion and contraction. These rails weigh 83 lbs. per yard. The total cost per mile of the double line, including rails, sleepers, pins, spikes, joint chairs, &c., laid complete, is stated at £3,470 2s. 8d., when the rails cost £7 5s. per ton.

On the subject of the permanent way of the Dublin and Drogheda Railway, it was argued that although, if taken at weight for weight, there could be no doubt of the superior strength of the double T shaped rail over the bridge-shaped rail, yet that in practice the travelling on the Dublin and Droghada Railway was remarkably smooth and equable ; which, it was contended, resulted from the firmness of the attachment of the bridge rail, direct upon the sleepers, and from the general perfection of the laying of the line. On the other hand, it was shown that a lighter double T shaped rail, with good cast iron chairs and wooden trenails for fastenings, and fixed upon triangular sleepers, as on the South Eastern, would, if the same machinery had been used in the preparation, and the same attention given to the laying down, have produced a better line. It was admitted, that the great points in establishing a railway, were to have heavier rails and stronger chairs, laid with accuracy, and constantly attended to ; but that even then, unless the carriages were well constructed and adapted for their load, no smoothness or uniformity could be insured.

Farmer's Luxuries.

It is wonderful, says the Journal of Commerce, how many delicious things may be had from a little land with a little care, and yet how great a proportion of people who have land, fail to use that little care. Mr. F. Grifing brought us yesterday half a dozen most beautiful and delicious nectarines, grown in his yard on Clinton Avenue, Brooklyn, with a very little trouble, yet we have hardly seen the fruit before in all our lives. Around most farmer's houses in the country you find very few fruit trees, and perhaps scarcely a shade tree, and certainly no ice house, while a few hours spent each year in studying the subject and executing plans judiciously formed, would double the enjoyments of life as far as they are found on the table. In New England even, with all its intelligence and sagacity, there are plenty of farms where a really good apple is not produced, and yet there might be cherries, peaches, pears, plumbs, and many other things. The people once did something about it, but did not succeed well, because they did not know how to manage the trees. Now the knowledge is within the reach of every one, and the luxuriant fruit ought to be.

Manufactures of Glass in the U. S.

Returns of the amount of various articles used in the manufacture of Flint Glass, in the nineteen furnaces now in operation :

1,200,000 bushels American Bituminous Coal.
50,000 " of Foreign "
4,500 tons of Anthracite Coal.
8,666 cords of Wood.
28.00 barrels of Rosin.
3,555 tons of Silex or fine Sand.
956 tons of Fire Clay ; 970 tons of Iron.
20,400 lbs. of Borax.
3,616,000 lbs. of Missouri Lead.
2,875,000 lbs. of Pearl Ash.
272,000 lbs. of Saltpetre : 1700 tons Straw.
475,00 Staves ; 270,000 Hoops.
1,400,000 Boards.
6,500 lbs. of Manganese.
22,500 lbs. of Arsenic.
$200,000 worth Brass, Britannia and Tin ware.

It is computed that to bring these various articles to the factories, the occasional use of 57,745 tons, is equal to the constant employment of 5393 tons coastwise, lake and river shipping. The manufactured goods require nearly as much more to transport them to market, making a total of about 10,000 tons coastwise lake and river shipping employed in the business constantly.

Characteristic Massacre.

A horrible massacre occurred in the city of Katamandoo, the capital of the kingdom of Nepant, in Northern India, last September. The queen had a favorite, one General Guggun Singh, whom the king caused to be murdered on the 14th of September at 10 o'clock at night. Her majesty was so outraged at the loss of her paramour, that she instigated the massacre of the prime minister, the members of the Cabinet, the nobility, the Council of State, generals, and chief men, to the number of *two hundred!* The king alone escaped, but his whereabouts was not known. A single nobleman only was saved, and the queen appointed him commander-in-chief. The queen is the king's second wife. The male children by the first wife, who would have preceded her children in the government, were among those slain or confined in dungeons. Nepant is a powerful kingdom, having about three millions of inhabitants. Most of the people are Tartars, as may be readily inferred from the conduct of the queen.

Interesting Incident at Saltillo.

When Gen. Worth's command was approaching Saltillo, and were about three miles distant from the city, four young women habited in American dress, were seen standing by the road side. Curiosity ran high to know who they were, and they received many a gallant salute as they passed them. At last an officer rode up to see who they were. They informed him that they were from New Jersey, and engaged in superintending the female operatives in a cotton and woolen factory hard by, and expressed, in the course of their conversation, a desire to hear again the old national air of Yankee Doodle.

The Sea Rising, or Land Sinking.

At Puzzuoli there is a gradual subsidence of the land. In March 1819, the floor of the temple of Jupiter Serrapis, was elevated 6 inches above the level of the sea. On the 11th of May, 1845, it was covered at low water to the depth of 18 inches, and 28 1-2 inches at high tide. The cicerene in attendance there, declared to a traveller, that during the last 30 years he had noticed a change equivalent to 3 feet 6 inches, in the height of the sea, on the piers of the bridge of Caligula.

Harper's Ferry Water Power.

That splendid water power at Herper's Ferry, the best, probably in this country, next to Niagara Falls. is beginning to be brought into use. A large cotton factory, 100 by 45 feet in the clear, by four stories in height, is being put up under the superintendence of Mr. Giddings, for a company with a capital of $40,000. The machinery is being built by Danforth, of Patterson, New Jersey.

Irish Bog.

It is estimated that no less a space than 2,839.000 acres—nearly one-seventh of the entire surface of Ireland—is occupied with bog. The total amount of turf fuel in Ireland, cut from this bog, is equivalent in power to above 470,000,000 tons of coal.

Theological Correspondence.

The following, given by a correspondent, and the subjoined answer, recently appeared in the Boston Chronotype. It may be interesting to some of our religious readers :—

"God can either take away evil from the world and will not, or, being willing to do so, cannot ; or, he neither can nor will, or, lastly he is both able and willing. If he is willing to remove evil and cannot, then he is not omnipotent. If he can, and will not remove it, then he is not benevolent; if he is neither able nor willing, then he is neither powerful nor benevolent; lastly, if both able and willing to annihilate evil, how does it exist ?"

—

Reply.—The fool who wrote the above, must have a droll idea of omnipotence. He thinks omnipotence could make two and two five, make up without down, hot without cold, sweet without sour or bitter, pleasure without pain, independence without freedom, and right without wrong. Omnipotence to sensible people, means only ability to do all that is doable. The only way God could have prevented the evil we see, would have been by not creating the greater good. Would that have been benevolent ?

Wages in Europe.

In England, the average rate of agricultural wages for an able man, with a family, is 9 shillings, or $1,98 per week. From this is to be deducted cottage rent at 35 cents per week, leaving $1,63 per week to provide himself with the necessaries of life. In France, a laborer in the same situation receives $1,04 per week : in Prussia, 66 cents ; in Germany $1,02 per week ; in Holland and Belgium $1,20 ; in Italy and the Austrian States, $1,15. It will be remembered that these averages are those of the common laborer—shepherds, carmen and mechanics receiving rather more.

Blowing up a Prayer Meeting.

Some of the students of Western Reserve College have recently manifested an unusual disposition for mischief. During a recent prayer meeting, they managed to explode a quantity of gunpowder, which had been previously placed under the desk and connected with a train. The explosion shivered the stand to pieces, breaking windows, blinds, knocking down a partition, and upsetting a stove, besides elevating some other articles.

A Dangerous Blast.

A blast at the new ship yard of Mr. Selfridge on Ring's Island, opposite Newburyport, nearly destroyed the shop of Mr. Nicholas P. French, on Thursday morning. A huge fragment of rock, estimated to weigh a ton and a half, came through the roof into the cellar, and another, not much smaller, knocked down the chimney and came through.

Our Noble Lakes.

The North American Lakes have been found to contain 1700 cubic miles of water, or more than half the fresh water on the globe, covering a space of about 80,000 square miles, and chaining a country of not less surface than 40,000 square miles.

North Bangor, Maine, is full of activity.—The rebuilding of the mills is in rapid progress. Twenty-four saws are to be in operation by the 1st of June.

To New Subscribers.

Those subscribing to the Scientific American will be furnished, if desired, with all the back numbers of the present volume. Bound together at the end of the year, they will form a handsome and valuable work.

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Production of Bar Iron direct from Ore.

Having had several applications for the particulars of a plan, for rendering bar iron direct from the ore, patented about two years since, we now inform our readers that such patent was obtained by Mr, Booker, near Cardiff, the effect of which, according to the specification is a saving of 50 per cent. in the iron, and the same in the fuel. A fully descriptive paper has already appeared in our columns; but, as the subject is one of importance, and at present exciting great attention, we append a brief review of the principal points. According to the old method, the refined pig iron is suffered to get cold, is broken into lumps, and then thrown into the puddling furnace; and the author's object is to simplify and accelerate the conversion of cast iron from its crude state, into malleable, or wrought iron, for which purpose the refinery, or furnace, is adapted to the various qualities or descriptions, of cast or pig, which it may be necessary to use, by surrounding, or inclosing, the hearth with blocks of cast iron, through which water may be allowed to flow, or not, as may be found expedient; and the blast being introduced through one, two or three apertures, as usual, the refinery is connected with the reverberatory furnace, which is made of the requisite form and dimensions. The bottom of the body of the furnace, the grate, bars and binding plates, and bars, are all formed of iron; the other parts of the furnace of fire-brick, clay, sand-stone, &c., as usual; in the neck, or near the flue, of the reveberatory furnace is an aperture, through which the iron, when it has become refined, or de-carburetted, is run in a fluid state, direct from the refining hearth into the puddling furnace, on each side of which is a door, so that two men can perform the puddling at once, while, by the old system, only one is admitted. With respect to the refining, having thrown up the fuel, and produced the necessary heat, a charge of 9 cwt. of cast iron is thrown on, melted and refined in the usual way; when the refining process is complete, the whole charge is run off in a fluid state, into the reverberatory furnace, which has already been heated to the proper temperature, and brought to a proper state, by throwing in a sufficient quantity of limestone and cinder; the men then regulate the heat in the proper manner, at the same time stirring and agitating it with bars and puddles, while the escape of the oxide of carbon, in a gaseous state, takes place, until the whole mass becomes agglutinized; the workmen then divide into lumps to the squeezer, hammer, or rolling cylinders, or other machinery, used for compressing iron. In the refining furnace of the scoria, or cinder, is produced, and drawn off as usual; but in the process of which the iron undergoes in the reverberatory furnace, the author does not find that any cinder will be produced,—the cinder thrown in being for the protection of the various parts of the furnace exposed to the action of the fluid metal; but none need be drawn off. The author accounts for this, because the common furnace is so constructed, that the iron operated upon in it is exposed to a very rapid draught, or current of air, which rushes in at the grate at the back of the furnace, passing off into the body and stack at the head thereof; this is so great as to oxidise the iron, and transform a great portion of it into slag and scoria during the process of puddling, which process, moreover, is so slow, that the iron, consisting of only 3 1-2 or 4 1-2 cwt. is exposed to the heat and draughts for full an hour and a half; while the new furnace is so constructed, that the current of air admitted at the grate is broken, and its oxidising effects on the surface of the iron, while fluid, and upon the fibrous particles while they cohere, after the oxide of carbon has been expelled, are completely neutralized. That portion, therefore, of the charge which, in the common puddling furnace, is converted into slag or cinder, in the author's is not wasted or oxidised, but remains, and is converted into pure malleable iron. The saving in fuel he thus accounts for—in the common puddling furnace not more than 4 1-2 cwt. of metal is admitted, and that in a cold and solid state; in his, double the quantity is admitted, and that in a melted and fluid state; it is, therefore, obvious, that the time, fuel and labor, necessary for melting the iron are saved, and that double the quantity of iron is converted from a cast into a malleable state within the same space of time.—*Min. Jour.*

RAISING WATER BY WATER POWER.

We do not introduce this subject as a new invention, but as an item of mechanical movement. The cut requires no special reference. Any person acquainted with machinery will recognize a large water-wheel with a geer wheel mouted on the same shaft or axle, This wheel turns a small geer wheel or pinion on another axle, to the front end of which, a small crank is attached. From the pivot of this crank, a rod called a pitman or shackle-bar, extends to the vertical branch of a knee lever, which is mounted on a pivot near its angle. To the horizontal branch of the knee lever, is connected the piston rod of a forcing pump below, by means of which a small portion of the water which turns the wheel, may be forced up through suitable pipes, several hundred feet above the ordinary level of the stream. An excellent forcing pump for this and similar purposes, is manufactured by Mr. D. L. Farnum, 29 Fulton street. We have made arrangements for presenting in progressing numbers of this paper, a series of elegant illustrations of hydraulics, embracing many new and elegant designs for ornamental fountains and mechanical apparatus.

How the Yankees make Railroads.

Mr. Samuel A. Walker, of Brookline, a director of the Boston and Maine Railroad, was called at a meeting last week, and amused the audience by referring to the difficulty in past years of getting railroads through New Hampshire. The road of which he was a director got to the New Hampshire line and stopped. The stock was down, and the company so few when they had finally obtained a charter from the New Hampshire Legislature, that when they went to break ground at Plaistow, they had to do it with an old broken shovel that would not enter the ground at all. And this was not all. After they had overcome the men of New Hampshire—they had to encounter the women. One good widow lady, who owned land on the line, which she refused to sell, hearing that the teams were coming to cut through declared that if the Legislature would not stop it, she would. So she took her knitting work and seated herself on a big stone that lay immediately on the line, and told the first teamster that if he drove through there he had to drive over her. The teamster refused to do so ungallant an act as to drive over the lady, but drove his team up to her, and getting from her barn his arms full of hay for his oxen, took his seat beside her. Up she rose, and declared that railroad or no railroad, she would not sit beside so ugly a fellow. This was the last of the opposition in New Hampshire.

Training a Spider.

The Abbe Olivet has described an amusement of Polissor, during his confinement in the Bastile, which consisted in feeding a spider, which he had discovered forming its web in the corner of a small window. For some time he placed his flies at the edge, whilst his valet, who was with him, played on a bag-pipe. Little by little, the spider used itself to distinguish the sound of the instrument, and issued from its hole to run and catch its prey. Thus calling it always by the same sound, and placing the flies at a still greater distance, he succeeded, after several months, in drilling the spider, by regular exercise, so that at length it never failed appearing at the first sound, to seize on the fly provided for it, even on the knees of the prisoner.

Hints for Pianists.

Have your pianoforte tuned at least four times in the year by an experienced tuner; if you allow it to go too long without tuning, it usually becomes flat, and troubles a tuner to get it to stay at concert pitch, especially in the country. Never place the instrument against an outside wall, or in a cold damp room, particularly in a country house; there is no greater enemy to a piano-forte than damp. Close the instrument immediately after your practice—by leaving it open, dust fixes on the sound-board, and corrodes the movements, and if in a damp room the strings soon rust. Should the piano-forte stand near or opposite to a window, guard, if possible, against a wet or damp day; and when the sun is on the window, draw the blind down. Avoid putting metallic or other articles on or in the piano-forte; such things frequently cause unpleasant vibrations, and sometimes injure the instrument. The more equal the temperature of the room, and the less the soft pedal is used, the better the piano-forte will stand in tune.

A very Whapper.

We find inserted as original in Neal's Saturday Gazette, and some other papers, the following statement, which no man of common sense will begin to believe. "The Baltimore and Ohio Railroad Company have in use an engine of twenty five tons, which with the aid of a newly constructed snow plough, that cost only $50, carries a heavy train up a steep ascent, through snow drifts eight or nine feet deep." There now: the story might perhaps pass except the going up a steep ascent (or steep hill); but that can't go. Surely some editors write very careless.

Time gained by Telegraph.

Directly after the clock struck twelve, on the night of the 31st of December, 1846, the superintendent of Paddington signaled his brother at Slough, by the electric telegraph, that he wished him a happy new-year; and answer was made. stating that the wish was premature, as a new year had not yet arrived! Such was indeed the fact, for time was matched against the telegraph, and beaten by half a minute. The distance being eighteen miles, the new year arrives at Slough one minute and forty seconds later than at Paddington.

RAILROAD INTELLIGENCE.

Utica and Schenectady.

It is the intention of the Directors of the Utica and Schenectady railroad to make four hours the ordinary running time between Albany and Utica. They also propose to run one train daily at a much greater speed. The day is not far distant when the whole distance from Albany to Buffalo will be accomplished in 12 hours, at a fare of $6.

Pennsylvania Central.

We learn that the Kensington Bank has subscribed for 100 shares of the stock of the Central railroad, leaving only $90,000 to be subscribed, to secure the charter and go ahead.

New Haven Canal Branch.

The grading of the tow path of the Farmington canal for a branch railroad, is, we are informed, already in progress—one man having taken a contract for twenty miles.

The Missouri Railroad.

The distance from Weston to Hannibal, across the country, is about one hundred and eighty-five miles, and by the river route, during the three or four months that the Missouri is navigable, it takes from four to five days to reach that point; by railroad the distance could be traversed in six or eight hours. The people in that section are so much in earnest on the subject, that measures will be put in progress for surveying and locating the route without delay.

A Railway from the Lakes to the Mississippi River.

The citizens of Milwaukie are about to organize a company to make a railroad from Milwaukie to the Mississippi. The country over which the road is to pass is said to be very favorable for the construction of a road, having but slight elevations, and but few rivers to cross. It would pass through a section of country unlimitable in its agricultural resources, and which is now nearly worthless for the want of a market for its products.

American Heroism.

At Tampico, lately, a fire broke out in the upper part of the town—the night was dark and cloudy—all thought it was a signal on the part of the Mexicans to commence a mutiny, when young passed-midshipman Ladd, of the navy, proceeded to the scene. On his arrival, he saw the house enveloped in flames, and upon the very top of the house a beautiful Mexican girl. He, amid the flames and smoke, succeeded in gaining the top of the house, and with his prize lowered himself safely to the ground with a rope.

A Stage-wreck.

A stage coach, with the mail from Warren, Ohio, to Wellsville, were lost on Saturday morning, the 2d inst., in attempting to ford the river at the south end of the Mahoning, and the life of Mr. Hiram Benham, stage agent, barely saved. The coach and mail have not yet been discovered or heard of. There was, fortunately, but one passenger, Mr. George Johnson, of Wheeling, Va., in the stage; he saved himself by leaping from the stage upon a high stump; the driver swam to, and climbed a tree, where they remained until taken off in a skiff.

A Village destroyed by Lightning.

The Journal des Debats of Paris, publishes the following letter, dated Munich, 20th October, 1846: "On Friday, the 16th October, a terrible storm accompanied by lightning, fell on the village of Schledorf, situated at three leagues distance from our capitol, and in less than two hours it completely destroyed that large and handsome village, *of which no trace remains.* The greater number of the houses were broken to pieces by the tempest, and the remainder were set on fire by the lightning and totally consumed The flames communicated to the neighboring forests, which continued burning for four days. During this disaster the thermometer marked at Munich 24 deg Reaumur, and suffocating heat was experienced, an extraordinary fact in the month of October. The sky was of an ashy hue.

Well Qualified.

A man in Springfield, Ohio, thus announces himself a candidate for constable:—"Philip E. Barnett has a wife and thirteen children—is poor—afraid to steal—too lazy to work—and would like to be elected constable.

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THE OPINION OF THE PRESS.

(Continued from No. 14.)

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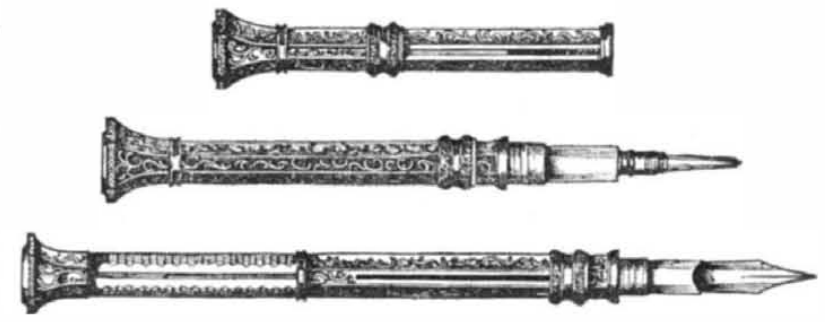

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Chemical Thaumaturgy.

The agency of heat, in the expansion of oil or any other liquid, belongs to another science than hydrostatics; thus we are naturally led to examine what was the extent, or rather how much we can trace, of those pretended miracles for which the ancients were indebted to a practical knowledge of chemistry. Passing to more elevated ideas, we may recall the example of Aclepiodotus, who chemically reproduced the deleterious exhalations of a sacred grotto, which proves that a science so prolific of apparent miracles was not unknown in the temples. Other facts tend to confirm this opinion. Marcos, the leader of one of those sects which, in the earlier ages of the church, endeavored to amalgamate with Christian doctrines, particular dogmas and rites of initiation, filled three cups of transparent glass with colorless wine; during his prayer, the fluid in one of these cups became blood-red, in another purple, and in the third an azure blue At a later period a well might be seen in an Egyptian church, the waters of which, whenever they were placed in a lamp, became of a sanguine color. In addition to these seeming miracles, probably borrowed from the mysteries of some ancient temple, let us add one of later times. At the court of the Duke of Brunswick. Prof. Beyruss promised that his coat should become red; and, to the amazement of the prince and his other guests, it actually became of that color. M. Vogel, who relates the fact, does not reveal the secret made use of by Beyruss; but he observes, that by pouring limewater on the juice of the beet root, a colorless liquid is obtained, and that a piece of cloth steeped in this liquid and quickly dried, becomes red in a few hours, simply by contact with the air; and further, that the effect is accelerated in an apartment where champagne and other wines are being plentifully poured out.

It has been proved by recent experiments, that wool dyed by Orchil of a violet color, or stained blue by the acidulated sulphate of indigo, in a bath hydro-sulphuric acid, becomes colorless, yet resumes the blue or violet color on exposure to the free air. Either explanation applies to the modern fact, and indicates the possibility of reviving ancient prodigies; it also discovers the manner in which, amidst flaming torches and smoking incense, in the sanctuaries of Polytheism, the veil concealing the sacred things may have been seen to change from white to a deep blood-red hue, and which spectacle was considered as the presage of frightful disasters. Blood boiling on the altars, or upon marble, or in the bases of the temple, was also indicative of peril and calamity. In Provence, in the sixteenth century, when a consecrated phial, filled with the blood of St. Magdalene, in a solid state, was placed near her pretended head, the blood became liquid, and suddenly boiled. The same phenomenon was exhibited in the cathedral of Avellino, with the blood of St. Lawrence; and also at Bissegali, with that of St. Pantaleon, and of two other martyrs In the present day, at an annual public ceremony at Naples, some of the blood of St. Janarius, collected and dried centuries ago, became spontaneously liquified, and rises in a boiling state in the phial that encloses it. These phenomena may be produced by reddening sulphuric ether with orcannetto, (*onosma*, Linn.,) and mixing the tincture with spermaceti. This preparation, at 10 degrees above the freezing point, (*centigrude*,) remains condensed, but melts and boils at twenty To raise it to this temperature, it is only necessary to hold the phial which contains it, in the hand for some time. If a little simple jugglery be combined with this philosophical experiment, the apparent miracle is complete. At Naples, the pretended relics of St. John the Baptist annually shed blood; and blood trickles from the withered bones of St. Thomas Aquinas, thus proving the authenticity of the relics held in veneration by the monks of Fossa Nouva; and the bones of St. Nicholas of Tolentius, exposed on the altar for the adoration of the faithful, soon fills with blood a large silver basin placed below it by the foresight of the priests. From this solution it seems to follow, that the Thaumaturgists were acquainted with alcoholic liquors, and with the art of distilling, necessary to obtain them; and thus it was easy for them to produce the spectacle of burning liquids with which they astonished the multitude.—*Philosophy of Magic*

Extra Fine Muslins.

The late Rev. William Ward, a missionary at Serampore, informs us that at "Shanteepoorn and Dhaka, muslins are made which sell at one hundred rupees a piece. The ingenuity of the Hindoos in this branch of manufacture is wonderful. At two places in Bengal, Sonar-ga and Tilkrumpooru, muslins are made by a few families so exceedingly fine that four months are required to weave one piece, which sells at five hundred rupees. When this muslin is laid on the grass, and the dew has fallen upon it, *it is no longer discernible.*"

Cotton yarn has been spun in England, making *three hundred and fifty hanks* to the pound weight, each hank measuring 840 yds. and the whole forming a thread of 167 miles in length. This, however, must be regarded as merely showing how fine the cotton can possibly be spun by machinery, since no yarn is or could be used in the making of muslins, or for any other purpose. The extreme of fineness to which yarns for muslins are ever spun in Great Britain, is 250 hanks to the pound, which would form a thread measuring 119 1-3 miles; but it is very rarely indeed, that finer yarn is used than 220 hanks to the pound, which is less fine than the specimen of Dacca muslins above mentioned. The India hand spun yarn is softer than mule-yarn, and the muslins made of the former, are much more durable than those made of the latter. In point of appearance, however, the book muslins of Glasgow are very superior to the Indian muslin, not only because it is better bleached, but because it is more evenly woven, and from yarn of uniform thickness, whereas the threads in the Indian fabric vary considerably.

Construction of Ice-Houses.

To build an ice-house in sandy or gravelly soils, is one of the easiest things in the world. The drainage there is perfect, the dry and porous soil is of itself a sufficiently good non-conductor. All that is necessary to do, is to dig a pit twelve feet square, and as many deep, line it with logs or joists faced with boards, cover it with a simple roof on a level with the ground, and fill it with ice. Such ice-houses, built with trifling cost, and entirely answering the purpose of affording ample supply for a large family, are common in various parts of the country.

But it often happens that one's residence is upon strong loamy or clayed soil, based upon clay or slate, or, at least, rocky in its sucstratum. Such a soil is retentive of moisture, and even though it be well drained, the common ice-house just described will not preserve ice half through the summer in a locality of that kind. The clayey or rocky soil is always damp—it is always an excellent conductor, and the ice melts in spite of all the usual precautions.

Something more than the common ice-house is therefore needed in all such soils. "How shall it be built?" is the question which has been frequently put to us lately.

To enable us to answer this question in the most satisfactory manner, we addressed ourselves to Mr. N. J. Wyeth of Cambridge, Mass., whose practical information on this subject is probably fuller and more complete than of any other person in the country—he, for many years, having had the construction and management of the enormous commercial ice-houses near Boston—the largest and most perfect known.

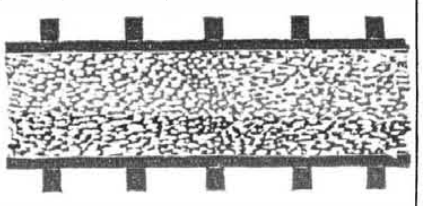
We desired Mr. Wyeth's hints for building an ice-house for family use, both above ground and below ground.

In the beginning we should remark, that the great ice-houses of our ice companies, are usually built above ground; and Mr. Wyeth, in his letter to us remarks, "we now never build or use an ice-house under ground; it never preserves ice as well as those built above ground, and costs much more. I, however, send you directions for the construction of both kinds, with slight sketches in explanation." The following is Mr. Wyeth's directions for building:—

1*st. An Ice-house above Ground.*—An ice-house above ground should be built upon the plan of having a double partition, with the hollow space between filled with some non-conducting substance.

Section of an Ice-house above Ground.

In the first place, the frame of the sides should be formed of two ranges of upright joists, 6 by 4 inches; the lower ends of the joists should be put in the ground without any sill, which is apt to let air pass through. These two ranges of joists should be about two feet and one-half apart at the bottom, and two feet at the top, At the top, these joists should be morticed into the cross-beams, which are to support the upper floor The joists in the two ranges should be placed each opposite another. They should there be lined or faced on one side with rough boarding, which need not be very tight. This boarding should be nailed to those edges of the joists nearest each other, so that one range of joists shall be outside the building, and the other inside the ice-room or vault thus:—



Manner of Nailing the Boards to the Joists.

The space between these boardings or partitions should be filled with wet tan, or sawdust, whichever is cheapest or most easily obtained. The reason for using *wet* material for filling this space is, that, during winter, it freezes, and until it is again thawed, little or no ice will melt at the sides of the vault.

The bottom of the ice vault should be filled about a foot deep with small blocks of wood; these are levelled and covered with wood shavings, over which a strong plank floor should be laid to receive the ice.

Upon the beams above the vault, a pretty tight floor should also be laid, and this floor should be covered several inches deep with dry tan or sawdust. The roof of the ice-house should have considerable pitch, and the space between the upper floor and the roof should be ventilated by a lattice window at each gable end, or something equivalent, to pass out the warm air which will accumulate beneath the roof. A door must be provided in the side of the vault to fill and discharge it; but it should always be closed up higher than the ice, and when not in use, should be ke kept close altogether.

2*d. An Ice-house below Ground.*—This is only thoroughly made by building up the sides of the pit with a good brick or stone wall, laid in mortar. Inside of this wall set joists, and build a light wooden partition against which to place the ice A good floor should be laid over the vault as just described; and this should also be covered with dry tan or sawdust. In this floor the door must be cut to give access to the ice.

As regards the bottom of the vault, the floor, the lattice window in the gables for ventilation, etc., the same remarks will apply that have just been given for the ice-house above ground, with the addition that in one of the gables, in this case, must be the door for filling the house with ice.

If the ground where ice-houses of either kind are built, is not porous enough to let the melted ice drain away, then there should be a waste pipe to carry it off, which should be slightly bent, so as always to retain enough water in it to prevent the passage of air upwards into the ice-house."

These plain and concise hints by Mr. Wyeth, will enable our readers, who have failed in building ice-houses in the common way, to remedy their defects, or to construct new ones on the improved plan just given. The main points, it will be seen, are to place a sufficient non-conducting medium of tan or saw-dust, if above ground, or of wall and wood partition if below ground, to prevent the action of the air, or the damp soil, on the body of ice enclosed in the vault.

Drain to an Ice-house.

In our paper of Dec. 15th, we spoke of the importance of effecting complete drainage to the vault of an ice-house, and stated that the drain should be so constructed as to prevent the passage of air through it to the ice. This, we said, could easily be done by making a *dip* or basin in the drain, where water would stand, whenever any melting of the ice took place.—*Ohio Cult.*

Africa.

The American missionaries at the Gaboon have been preparing a grammar of the Pangwee language, which they consider one of the most perfect of which they have any knowledge. This language is spoken coastwise nearly 200 miles, and how far in the interior is unknown.

A Great Country.

Silsbee, the comedian, in one of his farces, says that the United States are bounded on the North by the Aurora Borealis, on the East by the rising sun, on the west by the horizon, and on the South by as far as we choose to go.

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